

TUSHAR ALLOTMENTS COLLABORATION

February 6, 2008
Beaver Ranger District Office
Beaver, UT
9 a.m. – 5 p.m.

Meeting Summary

Next meeting: April 29, 2008 – meet at 8 am at Beaver Ranger District Office,
or at 9 am in the field (location to be determined)

Primary purpose of the next meeting (in the field) will be to provide training for the various field activities / observations to take place during Summer 2008. There will also be a discussion about three-way exclosures and whether their placement this field season might provide useful information for either allotment.

Present:

| | |
|----------------------------|--|
| Bob Campbell | USFS / Fishlake Natl Forest |
| Jim Catlin | Wild Utah Project |
| Rose Chilcoat | Great Old Broads for Wilderness |
| Steve Flinders | USFS Wildlife Biologist |
| Diane Freeman | USFS / Fishlake Natl Forest |
| Wayne Hoskisson | Sierra Club, UT Chapter |
| Sean Kelly | UT Div Wildlife Resources |
| John Keeler | UT Farm Bureau |
| Terry Krasko | USFS / Fishlake Natl Forest |
| Mary O'Brien | Grand Canyon Trust |
| Terry Shepherd (phone) | Red Rock Forests |
| David Smuin | Grand Canyon Trust |
| Doug Sorensen | USFS / Fishlake Natl Forest |
| Dustin Westwood | Ten Mile allotment |
| Donald Willden (afternoon) | Beaver County Commissioner / sportsman |
| Joe Yardley | Pine Creek / Sulphurbeds Allotment |
| Selena Yardley | Pine Creek / Sulphurbeds Allotment |
| | |
| Michele Straube | Facilitator |
| Julie McAdams | Assistant Facilitator |

Meeting Agenda: Included at the end of these minutes. Agenda topics not discussed, due to lack of time, are highlighted. (Page 5 of this meeting summary)



CommUnity Resolution Inc.

Phone 801-583-6362

Fax 801-582-2043

mstraube@mindspring.com

A. Note-Taking: Julie McAdams took notes on the computer, which were projected on the screen as we went along. At future meetings, note-taking responsibilities will rotate among Collaboration members.

B. Website:

- Anyone who wants to post something on the website should contact Michele Straube (mstraube@mindspring.com) and she'll get it posted on a private USIECR site until the review team (Selena Yardley, John Keeler, Terry Krasko, Mary O'Brien) reviews and approves the posting. Once approved, USIECR will move the item(s) to the public portion of the site.
- Changes have been made to provide easy public access to the Collaboration website:
 - A Google search now brings up the Collaboration website.
 - USIECR has placed a direct link to the Collaboration website on the USIECR Project Websites page.
 - Several Collaboration members have placed a direct link to the Collaboration website on their organization's websites.
- Mary O'Brien highlighted some corrections / additions needed to some of the maps posted to the website by Doug Sorensen.
 - Several fire and vegetative treatment maps do not have dates of the treatments; possibly another GIS layer exists that was not posted to the website, or which does not load.
- Several maps do not load completely; if one saves them first, then loads them from the saved file, they do load completely.
 - Michele Straube will contact USIECR to see whether anything can be done to fix this.

Collaboration Agreement Topics: The group went through the remaining agreement topics, focusing on these issues:

- Summarize / confirm what has been done to date
- What questions do we need to answer to develop recommendations by April 2009?
- What information do we need to answer the question(s)?
- How to get information in 2008?
- Who takes on responsibility?

The group discussion was captured in the following charts. The facilitators will develop "to do" lists from these charts, to help those assigned responsibility meet their commitments.

C. Grazing management – Ten Mile Allotment (Doug Sorensen). See Chart 1, "Grazing Management – Existing and Desired Conditions" (Page 8 of this meeting summary).



D and E. Aspen and Mountain Mahogany Recruitment (Mary O'Brien and Bob Campbell). See Charts 2 and 3, "Aspen Recruitment" and "Mountain Mahogany Recruitment" (Pages 15 and 17 of this meeting summary, respectively).

F. Beaver reintroduction – follow-up from 11/29 meeting

- Terry obtained verbal permission for use of water from ENEL.
 - Decision on whether Pine Creek water will be needed or not for Cove Fort will be made in the next month or two.
 - ENEL may have \$\$ or in-kind services to offer to the Collaboration.
- Some concerns are possible from one landowner, which can probably be addressed through suggested changes in the MOU and a map showing specific reintroduction locations.
- Discussed comments and revisions to draft beaver reintroduction MOU.
 - Mary to revise and finalize revisions with MOU drafting group.
 - After MOU is finalized, present it to all water rights owners for signature.
- There should probably be a ban on trapping for the entire Pine Creek drainage.
 - Notification to trappers can be provided by posting a notice at the two most-used entry points to Pine Creek.

G. Pine Creek Allotment – follow-up from 11/29 meeting

- Sean reported that dedicated hunters will install/maintain/improve some fences on the Pine Creek allotment.
- Utilization cages still need to be placed; early and heavy snow has prevented doing it so far.
- Groundtruthing of current suitability / vegetation maps is underway; necessary maps have been provided to John C / Jim C.
- January 2008 elk counts report presented by Sean:
 - Methodology of count discussed
 - Jan. 1-4: Beaver count (650 elk counted, with estimate of 850 winter population, higher population in summer)
 - Pine Creek 61 elk
 - Ten Mile 0 elk; 9-11 elk below Bumblebee Springs.



- Cheatgrass mapping
 - Pine Creek permittees developed a preliminary map of cheatgrass locations.
 - Mary suggested reducing that to an 11 X 17 map that can be carried into the field by observers who can then add additional sightings.
 - Bob suggested creating two additional (unreduced) 11 X 17 maps of specific sections of the allotment where more detailed cheatgrass data would be helpful.
 - Ten Mile Allotment map to be given to Dustin at end of meeting so that similar cheatgrass mapping can be done for Ten Mile Allotment. (done)
- Proposed method for assessing willow (Mary)
 - Closable metal ring to be used for counting browsed/unbrowsed willows.
 - Guide to willow species to be developed.
- Chart of Summer 2008 activities on Pine Creek Allotment was updated, based on Ten Mile discussions earlier in the meeting; see Chart 4, "Grazing Management – Existing and Desired Conditions" (Page 18 of this meeting summary).

H. Set 2008 Field Work Dates: See Chart 5 for specific dates for some of the Summer 2008 field activities. Timing of many activities is dependent on when cows enter and leave which pasture, so these dates will have to be set after the AOP meeting; and perhaps also as the summer progresses. (Page 25 of this meeting summary)

I. Additional Data onto Website (Doug to add)

- Range readiness
- Potential Range Productivity map for Pine Creek
- Potential Range Productivity map for Ten Mile

Next Steps:

- Julie/Michele to clean up documents and distribute
- Group feedback to documents
- April 29: next meeting, 8:00 a.m. in Beaver or 9:00 a.m. at site



Tushar Allotments Collaboration

February 6, 2008 – 9:00 am – 5 pm
Beaver Ranger District Office

AGENDA

Meeting Objectives:

- Reach agreement on questions to be answered by April 2009
 - Ten Mile Allotment grazing management, existing and desired conditions
 - Aspen recruitment
 - Mountain mahogany recruitment
- Develop preliminary data gathering plan for 2008 field season
- Clear assignment and acceptance of responsibilities
- Follow-up on progress made since last meeting
- Identify next steps

NOTE: No specific times have been set. Topics A – H and Next Steps will be completed at this meeting; we will address the remaining topics as time allows.

- A. Notetaking
- B. Website Update
- C. Go topic-by-topic through the agreement topics
 - Summarize / confirm what has been done to date
 - What questions do we need to answer to develop recommendations by April 2009?
 - What information do we need to answer the question(s)?
 - How to get information in 2008?
 - Who takes on responsibility?

Grazing Management – Existing and Desired Conditions (Doug Sorensen)
Ten Mile Allotment:

- Forage capacity
- Entry dates
- Livestock control and management
- Water quality
- Big game / livestock
- Grazing season dates
- Utilization criteria
- Cheat grass
- Grazing rotation
- Structural improvements
- Vegetative improvements



CommUnity Resolution Inc.

Phone 801-583-6362

Fax 801-582-2043

mstraube@mindspring.com

- Re-reading of vegetation transects

Around 10:30 **BREAK**

Around 12 **LUNCH** (bring your own or bring money for Subway)

- D. Aspen Recruitment (Mary O'Brien and Bob Campbell)
- E. Mountain Mahogany Recruitment (Mary O'Brien and Bob Campbell)
- F. Beaver reintroduction - Follow-up from 11/29 Meeting
 - Status of getting permission / signatures for use of water from water rights owners and ENEL
 - Collaboration review of management plan
 - Other open issues?
- G. Pine Creek Allotment - Follow-up from 11/29 Meeting
 - UDWR dedicated hunters to install / maintain / improve fences before 6/16/08?
 - Placement of utilization cages?
 - Groundtruthing of current suitability / vegetation map
 - January 2008 elk counts
 - Cheatgrass mapping / interns available?
 - Proposed method for assessing willow
 - Vegetative treatment sites, goals, etc. / sites to visit in 2008
 - Re-reading vegetation transects
 - Other open issues?

Around 2:45 **BREAK**

H. Set 2008 Field Work Dates

I. Additional Data onto Website

J. Public Outreach / Media Meetings (Davida Carnahan)

- K. Next Steps
 - Next meeting
 - Other?



Invited Participants

| | |
|--|---|
| Lee R Yardley Joe Yardley Selena Yardley Clark Bradshaw | Pine Creek/Sulphurbeds Permittees |
| Wyatt Barnson | Ten Mile Permittee |
| Terry A. Krasko | USFS / Fishlake NF |
| Diane Freeman | USFS / Fishlake NF |
| Bob Campbell | USFS / Fishlake NF |
| Steve Flinders | USFS / Fishlake NF |
| Doug Sorensen | USFS / Fishlake NF |
| Davida Carnahan | USFS / Fishlake NF / BLM |
| Sean Kelly | UT DWR |
| John Keeler | UT Farm Bureau |
| John Carter Unable to attend | Western Watersheds Project |
| Jim Catlin | Wild Utah Project |
| Rose Chilcoat | Great Old Broads for Wilderness |
| Wayne Hoskisson | Sierra Club, UT Chapter |
| Mary O'Brien | Grand Canyon Trust |
| Terry Shepherd Phone-in option | Red Rock Forests |
| Donald Willden | Beaver County Commissioner Sportsman |
| Kevin Mueller | UT Environmental Congress |



CHART 1

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

1. Forage Capacity

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|--|
| <p>Capability and Suitability analysis completed as part of</p> <p>1. 1967 Range Analysis site map scans</p> <p>2. GIS analysis for Forest Plan revision.</p> | <ul style="list-style-type: none"> o How to measure progress? o Water availability? o Long-term trend? o How many cows in 2008 season? 150? (less than current permit allowance) o Comparison of forest plan stubble height to utilization o Can utilization be used to judge range capacity? o What is the capacity when most of the Ten Mile pasture is non-range? o What is the current forage productivity? o Can the changes be assessed using 1967 data? | <ul style="list-style-type: none"> o <u>March AOP Mtg</u>: Initiate changes in time and number of grazing (20% reduction per year for three years, 2008 - 2010; ask Permittee for accelerated reduction (less than 150 cows in 2008?) <i>Doug & Terry</i> o <u>End of growing season</u>: Track/monitor riparian stubble height and riparian utilization. <i>Doug & Jim C & Mary (willow/aspen)</i> o <u>Prior to April 1</u>: Use existing cages and add cages in riparian areas <i>Doug</i> (need to build 4-5 new riparian cages) o <u>End of summer</u>: Collect existing knowledge on ecological potential plant communities. <i>Jim C, Doug & John C</i> o <u>Mid-July (low country) Late-August (mid country)</u>: Determine the nearest reference area for conditions (Cottonwood? South Creek? Birch Creek East?) <i>Bob C. & Mary</i> |
| <p>Utilization study 1998 thru 2007, with new tentative grazing capacity determination.</p> | | |
| | | <p><u>July 7-18</u>: Re-read FS and UDWR trend studies in 2008. <i>Bob Campbell/Dave Tait/Doug Sorensen; Mary O'Brien; potentially UNPS people; John K; Sean Kelly (UDWR)</i> (get existing UDWR trend studies from Jim Davis); Bob Edwards (?) - <i>John C</i> will check. 10-12 on Ten Mile and Pine Creek each; 2 weeks total.</p> |



CommUnity Resolution Inc.

Phone 801-583-6362

Fax 801-582-2043

mstraube@mindspring.com

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

2. Grazing Season Dates

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|---|
| Existing dates from permit and old AMP, June 11 to October 10 | Are these dates suitable for continued livestock grazing? | Define range readiness and when it occurs. |
| Define range readiness and when it occurs. Short literature search on range readiness. | | <u>March</u> : Range readiness report to website. <i>Doug</i> |
| | | <u>Summer</u> : Describe what was used as the range readiness criteria for this year and how was it implemented? Periodic, recorded field visits. <i>Doug & Permittee</i> |

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

3. Livestock Control and Management

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|--|---|
| Allotment boundary and interior fences have been constructed. Maintenance needed annually. | What additional work is needed to complete pasture integrity and adequately control livestock? | <u>First of March</u> : Evaluate existing fencing and develop fencing plan. <i>Doug, Terry, & Permittee</i> |
| Operator provides routine herding and movement between pastures. | What level or intensity of herding is needed to adequately control livestock? | <p><u>First of March</u>: Develop herding plan for each pasture. <i>Doug & Permittee</i></p> <p><u>Summer</u>: Monitoring, periodic visits, and reports to determine if utilization and stubble height (upland & riparian) standards are reached; make changes to grazing use of the Allotment. <i>Doug & Permittee & anyone in communication with Doug regarding observations</i></p> <p><u>Immediately</u>: Doug send, Mary modify EMS unit exam record. <i>Doug & Mary</i></p> |



| | | |
|--|---|--|
| | <p>What frequency of herding is currently occurring in each creek?</p> <p>How do we select other creeks to ask the same question?</p> | <p>Visit Ten Mile Creek and Order Creek <u>before, during, and after grazing</u> in terms of forest plan standards. <i>Doug, Mary, & Permittee</i></p> |
|--|---|--|

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

4. Water Quality

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|--|
| <p>Level II Inventory riparian survey in Ten Mile Creek (under contract to FS)</p> <p>Doug has documentation of condition of developments on springs</p> | <p>Are there springs and wetlands that need to be protected?</p> <p>What are the conditions of spring habitat on the allotment?</p> | <p><u>By May:</u> Develop a rapid assessment checklist re: habitat conditions of springs. <i>Mary</i></p> <p><u>July (concurrent with reading trend studies):</u> Use checklist to do a survey of selected springs: both developed and undeveloped, for habitat conditions. Could be done during re-survey of Ten Mile Allotment springs (it's time to do that) (Price, Cougar, Order, Bumble Bee, undeveloped in Ten Mile pasture, City Creek developed spring) <i>Doug & Mary</i></p> <p><u>August:</u> Biologically-based rapid riparian assessment on Ten Mile Creek. <i>Jim C & Dave Smuin & Collaboration</i> Training on how to do this will take place in advance.</p> |
| <p>Stock water has been developed in many locations to provide adequate water and to draw cattle from streams and springs.</p> | <p>Are existing locations adequate? Is adequate maintenance being accomplished?</p> | <p><u>Concurrent with trend studies:</u> Evaluate stock water locations for needed improvements. Cougar? Bumble Bee to rebuild corral at the pond. <i>Doug, engineers?, Permittee</i></p> <p><u>Concurrent with trend studies:</u> Prioritize stock water developments/wetlands fencing. <i>Doug, Permittee, Collaboration</i></p> |



Grazing Management – Existing and Desired Conditions Ten Mile Allotment

5. Elk / Livestock

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|--|
| UDWR herd unit elk counts. Report on 2008 elk count. | Degree to which aspen sprout browsing is due to elk? Degree to which understory is being consumed by elk? | <u>Before cattle entry, right after cattle leave; and prior to snow:</u> Aspen browse counts throughout the allotment. <i>Mary</i> |
| Population (elk/doe) objectives | Can we distinguish between elk & cattle? Who is eating vegetation? When? Are we managing for average conditions or troubled spots? | Estimate AUMs of cattle and elk and forage consumption. <i>Jim C., John C.</i> Find out what data exists already on three-way exclosures. Report to group at <u>next meeting</u> (including recommendations for locations to place exclosures and what can be learned from them) <i>Bob C., Doug, Steve, Sean</i> (<i>Sean</i> – get Betenson Flat & Grindstone Flat data) (<i>Bob C.</i> – get other data) <u>Before group decides where to put three-way exclosures:</u> Field trip to look at existing three-way exclosures in Betenson Flat and Grindstone Flat to see what can be learned from them? (get data from Ephraim) <i>Doug</i> |
| Pellet group counts. | Can we distinguish between elk & cattle? Who is eating vegetation? When? | <u>Before cattle entry, during pasture use, and right after cows leave, pasture by pasture (determine after AOP meeting):</u> Measure understory utilization in each pasture just before cattle enter, during pasture use, and right after they leave. <i>GOB volunteers, Mary's students, Jim C. & John C.</i> (Part of early range readiness monitoring?) <u>Late May/Early June:</u> Pellet group counts. <i>UDWR, Steve</i> |



| | | |
|--|--|--|
| | | <p><u>Thursday, March 20, 6:00 p.m.</u>: Evening phone conference to find out about the design of understory utilization cage placement. Also discuss utilization studies in rested pasture and Cottonwood Allotment, matter <i>Mary, Bob C., Permittees, Doug, Steve, Sean</i></p> <p><u>During summer</u>: Look at utilization in Price (pasture Ten Mile Allotment rested in 2008) and Cottonwood Allotment (not grazed 30 years) and compare with utilization elsewhere in the two allotments and in problem areas. <i>Doug, Mary, anyone who goes out</i></p> |
|--|--|--|

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

6. Utilization Criteria

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|--|---|
| Forest Plan Amendment, August 1, 2001. All Permits modified to include new standards. | Is the standard being met or exceeded? | <u>Throughout season</u> : Look at aspen, cottonwood, and willow browse. <i>Mary & interns and GOBs</i> |
| | Is the standard effective in improving the forage resource? | |
| | Do these criteria (measuring browse) meet the desired conditions and ecological goals? | |
| | How to address both streambank and browse utilization? | <u>August</u> : Use rapid stream riparian assessment. <i>David Smuin, Jim C</i> |
| | | A forest supplement to accept the browsing methods being used. <i>Doug, Diane F.</i> |



Grazing Management – Existing and Desired Conditions Ten Mile Allotment

7. Cheat Grass and Noxious Weeds

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|------------------------------------|---------------------|---|
| Largely N/A for Ten Mile Allotment | | <p><i>Throughout summer:</i> Mapping of cheatgrass on the allotment. <i>Anyone and everyone.</i></p> <p>Form by which people can enter cheatgrass observations. Form: <i>Mary & Doug</i>, observations: <i>Anyone</i></p> |

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

8. Grazing Rotation

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|--|
| Rotation schedule developed in draft AMP, being followed in Annual Operating Instructions each year. | Are these schedules suitable for continued livestock grazing? | <i>March AOP Meeting:</i> Evaluate existing rotation schedule and modify as needed. <i>Doug, Permittee</i> |

Grazing Management – Existing and Desired Conditions Ten Mile Allotment

9. Structural Improvements

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|---|
| Fences and water developments have been constructed. | Are new, additional improvements needed?? | <i>March AOP Meeting:</i> Evaluate effectiveness of existing improvements. (see # 3, 4) |
| List of improvements shown in permit as being assigned to permit holder for maintenance | Are existing improvements in need of additional work? | <i>Mid-late July:</i> Visit 2 water developments. <i>Doug & Permittee</i> |
| | <p>Is the water system going to be developed?</p> <p>o <i>Future?:</i> Develop water system (pump, pipeline & trough) (permittee)</p> | <i>Anytime (pasture is at rest in '08):</i> Track whether cattle get into Cottonwood Allotment. <i>Anyone</i> |



Grazing Management – Existing and Desired Conditions Ten Mile Allotment

10. Vegetative Improvements

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|--|--|
| 1961-City Creek-Price Spring, 700 Acres. Dixie harrow. | Would the allotment benefit from additional treatments, and if so, where? | |
| Fire and post-fire logging occurred in south slope of Mt. Holly (NW portion of Allotment) | | |
| | Are there going to be future vegetation treatments imposed? Can benefits be sustained? | |
| | | <i>By October:</i> Gather information on the historical presence of fires in area. <i>Bob C.</i> |
| | | <i>By October:</i> Gather information on historical aspen landscapes. <i>Bob C.</i> |



CHART 2

Aspen Recruitment

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|--|--|
| <ul style="list-style-type: none"> Forest Service vegetation map showing mixed-conifer-aspen and aspen-only areas on Ten Mile and Pine Creek-Sulphurbeds Allotments. [Note: the map shows aspen-only stands along City Creek upstream of campground, though in reality it is all dominated by conifer] Southwest ReGAP map of the two allotments and Cottonwood Allotment showing aspen and mixed aspen-conifer areas [see http://tushar.ecr.gov/?link=102] | <p>What is the status of the following?</p> <ul style="list-style-type: none"> Proportion/locations of conifer-dominated aspen vs. aspen-dominated sites on the two allotments Browse levels of aspen-only stands in different locations on the two allotments Stand structure of aspen-only stands on the two allotments Understory in aspen-only stands and in mixed-aspen-conifer stands <p>Will the stands regenerate without browsing?</p> <p>What portion of aspen is not regenerating?</p> <p>What are the dominant causing factors of conifer encroachment? (Barton Stam thesis may be helpful/informative)</p> <p>(keep clonal differences in mind)</p> | <p><i>Summer:</i> Evaluate browse levels, stand structure, and understory of aspen-only stands. (Mary & interns) (Mary's studies will help to inform regeneration questions.)</p> <p>Overlay Mary's data with recent fire history maps and soil types. Factor in mechanical treatments, drought cycles, and grazing history (rest cycles). [Note: To "factor in" mechanical treatments and drought cycles and grazing history, a non-grazed reference is needed]</p> <p>Methodology (Bob & Mary)</p> |
| <p>Collaboration field visits to Ten Mile (June 12 and 21, '07), Pine Creek-Sulphurbeds Allotments (June 14 and 22, '07), including looking at aspen (Field visit notes at http://tushar.ecr.gov/pdf/field_meetings_issues_2007_06.pdf]</p> | <ul style="list-style-type: none"> Results of past aspen vegetation treatments on the two allotments. Results of wildfire in aspen on the two allotments Data/locations on past use of fire or logging to regenerate aspen in allotments on Fishlake National Forest. | <p>ASAP: Give Mary information on what treatments were done and whether goals were reached. (Bob C)</p> <p>Restoring the West website PowerPoint presentations (on the Utah State University website http://extension.usu)</p> |



CommUnity Resolution Inc.

Phone 801-583-6362

Fax 801-582-2043

mstraube@mindspring.com

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> o Current understory/ recruitment on aspen stands burned or logged for regeneration on Fishlake National Forest | .edu/forestry/UtahForests/RTW2006/RTW2006.htm) |
| <ul style="list-style-type: none"> o Sean Kelly visited Ten Mile Allotment aspen north of Mt. Holly Club (date?) o MO'B visited same area to test <u>aspen stand structure</u> rapid assessment protocol (three stands; Aug 22, '07) | <ul style="list-style-type: none"> o Any existing <u>aspen</u> <u>exclosures</u> on the two allotments? o Have any <u>comparisons</u> been made of (1) aspen browse and stand structure in Cottonwood allotment (elk, but no livestock); and (2) in Ten Mile Allotment or Pine Ck/Sulphurbeds Allotments? | <i>Summer:</i> Evaluate browse levels, stand structure, and understory of aspen-only stands in Pine Creek, Ten Mile and Cottonwood allotments. (Mary & interns) |
| <ul style="list-style-type: none"> o MO'B test of an aspen stand structure rapid assessment protocol on 14 stands in PineCk-Sulphurbeds, Ten Mile, and Cottonwood Allotments (Aug 21-23, '07) o Report prepared on structural assessment of the 14 aspen stands. http://tushar.ecr.gov/pdf/map_aspenstructure_Rapidassessmentreport.pdf | <ul style="list-style-type: none"> o Do aerial maps show trends in areal extent of aspen cover over time? | |
| A rapid assessment <u>protocol for aspen/cottonwood browse</u> levels (Mary O'Brien); tested on one site near Tasha Crk (not on the Tushar allotments) [See http://tushar.ecr.gov/pdf/rpd_assm_asp_cot.pdf] | | |



CHART 3

Mountain Mahogany Recruitment

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|--|
| Southwest ReGAP map of the two allotments and Cottonwood Allotment showing mt mahogany areas Pine Creek: http://tushar.ecr.gov/pdf/pine_creek_map1.pdf Ten Mile: http://tushar.ecr.gov/pdf/pine_creek_map2.pdf | Degree to which mt. mahogany (and which species) are experiencing recruitment, and where <u>not</u> experiencing recruitment on the two allotments. | |
| Collaboration field visits to Ten Mile (June 12 and 21, '07), Pine Creek-Sulphurbeds Allotments (June 14 and 22, '07, including looking at mtn. mahogany (Field visit notes at http://tushar.ecr.gov/pdf/field_meetings_issues_200706.pdf Some locations are experiencing recruitment; some not. | What has been the response of mtn. mahogany to wild fire on the two allotments? | |
| Curl-leaf mtn. mahogany (<i>Cercocarpus ledifolius</i>) more common than alderleaf mt. mahogany (<i>C. montanus</i>) [BOB??] | <ul style="list-style-type: none"> ○ Does any trend data on mt. mahogany exist on the two allotments? ○ Is there any trend data on any other mtn brush species on the two allotments? | |
| | Do any data exist on mtn. mahogany understory in the two allotments? -- May have some on soil map symbols, soil map polygons (Bob) | <i>Early Summer:</i> Develop simple metric evidencing where mountain mahogany is noticed, including 3-4 size classes. (Jim, Bob & Mary & anyone making observations) |



CHART 4

Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment

1. Forage Capacity

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|--|--|
| Capability and Suitability analysis completed as part of 1. 1967 Range Analysis 2. GIS analysis for Forest Plan revision | <ul style="list-style-type: none"> ○ Where are soils that are prone to erosion, i.e., that are not suitable for grazing? ○ What is the current forage productivity on certain sites? ○ What is the current ground cover on certain sites? | <ul style="list-style-type: none"> ○ <u>Prior to Feb 2008:</u> Groundtruthing of the current suitability/vegetation map to consider erosion (Doug visit in Salt Lake with Jim/John on GIS to look at preliminary sites for examining during summer 2008.) <i>Joe, Doug, Jim, John C., John K.</i> ○ <u>Prior to Feb 2008:</u> Doug scans in 1960s/1970s range analysis site maps. ○ <u>Prior to April 1:</u> Putting out more cages. John can provide 12-15 upland cages. Doug will make some riparian cages. <i>Doug, Joe Y and Selena</i> |
| Updated analysis in early 1980's | | <ul style="list-style-type: none"> ○ <u>July 7-18.</u> Re-read FS vegetation and UDWR wildlife habitat trend studies in 2008. <i>Bob Campbell/Dave Tait/Doug Sorensen; Mary O'Brien; potentially UNPS people [one has accepted so far for July 10-12 for veg transects]; John K; Sean Kelly (UDWR)</i> (get existing trend studies from Jim Davis); Bob Edwards(?)-<i>John C</i> will check. 10-12 veg transects on Ten Mile and Pine Creek each; 2 weeks total. |



**Grazing Management – Existing and Desired Conditions
Pine Creek – Sulphurbeds Allotment**

2. Entry Dates

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|--|
| Existing dates from permit and old AMP, June 16 (used to be June 1) to September 30. | <ul style="list-style-type: none"> Are these dates suitable for continued livestock grazing? | John C. says NRCS has developed site descriptions with tables on grass development/dates. |
| | Are there options to work with BLM with earlier or later dates? | <p>Talk with BLM <u>during 2008</u>. <i>Doug, Terry, Permittees</i></p> <p><u>October</u>. Revisit after data-gathering in 2008. <i>Collaboration</i></p> |
| Define range readiness and when it occurs. A short literature search on range readiness (Doug; Bob C.). | | <u>Summer</u> . Describe what was used as the range readiness criteria for this year and how it was implemented. Periodic, recorded field visits. <i>Doug & Permittees</i> |

**Grazing Management – Existing and Desired Conditions
Pine Creek – Sulphurbeds Allotment**

3. Livestock Control and Management

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|---|
| Allotment boundary and interior fences have been constructed. Maintenance needed annually. | <ul style="list-style-type: none"> What additional work is needed to complete pasture integrity and adequately control livestock? Are dedicated hunters going to be working on fences? | <u>February AOP Meeting</u> . Evaluate existing fencing and develop fencing plan. (Selena, Doug, Sean Kelly) |
| Operators provide routine herding and movement between pastures. | What level or intensity of herding is needed to adequately control livestock? | <u>February AOP Meeting</u> . Develop herding plan for each pasture (permittees, Doug). |
| | <ul style="list-style-type: none"> What frequency of herding is currently occurring in each pasture? How would we know whether the problem in Wildcat is primarily the cattle not being out of Wildcat Creek on time? | <ul style="list-style-type: none"> Visit Wildcat Creek, Grassy, Pine, Twitchell and North Creeks before, during, and after grazing in terms of forest plan standards. (Doug, Mary, Selena, Clark(?)) |



| | | |
|--|---|--|
| | <ul style="list-style-type: none"> ○ How would we know there is a “problem” or not in Wildcat Creek? ○ How do we select other pastures to ask the same questions? | |
|--|---|--|

Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment

4. Water Quality

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|--|---|
| <p>Shell resources Level II riparian surveys in Pine Creek, Wildcat, and Lt. North Cr.</p> <p>Doug has documentation of condition of developments on springs.</p> | <p>Are there springs and wetlands that need to be protected?</p> <p>What are the conditions of springs habitat on the allotment?</p> | <ul style="list-style-type: none"> ○ <i>By May:</i> Need a rapid assessment checklist re: habitat conditions of springs (<i>Mary</i>) ○ A survey of selected springs: both developed and undeveloped, for habitat conditions. Could be done during re-survey of Pine Creek/Sulphurdale Allotment springs (it's time to do that) (<i>Doug; Mary</i>) |
| <p>Stock water has been developed in many locations to provide adequate water and to draw cattle from streams and springs.</p> | <p>Are existing locations adequate? Is adequate maintenance being accomplished?</p> | <ul style="list-style-type: none"> ○ Evaluate stock water locations for needed improvements (some evaluation has been done with INFRA surveys) (<i>Doug; assigned permittee; Mary</i>) – e.g., Dipping Vat and associated wetlands below; North Spring overflow. ○ Prioritize stock water developments/wetlands fencing (<i>Doug, permittees; Collaboration</i>). |
| | | <p><i>August:</i> Biologically-based rapid riparian assessment on Pine Creek. <i>Jim C & Dave Smuin and Collaboration</i> Training on how to do this will take place in advance.</p> |



Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment

5. Elk / Livestock

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|--|--|
| UDWR herd unit elk counts. | <ul style="list-style-type: none"> ○ Degree to which aspen sprout browsing is due to elk? ○ Degree to which understory is being consumed by elk. | <ul style="list-style-type: none"> ○ <i>Bring by February:</i> January 2008 elk counts (UDWR; Joe Yardley participate) ○ Aspen browse counts throughout the allotment – before cattle entry; right after cattle leave; and prior to snow. (Mary and interns) |
| Population (elk/doe) objectives (at 890 in 2005; pressure to raise to 950) | <ul style="list-style-type: none"> ○ What data exist already on three-way exclosures. | <ul style="list-style-type: none"> ○ <i>Before February:</i> Distribute Catlin/Carter paper on AUM/forage estimation of wildlife/livestock (Mary) ○ Estimate AUMs of cattle and elk and forage consumption. (Jim Catlin/John Carter) |
| Paper on ungulate consumption (John, Allison and Jim) | To Sean: <i>Are these planned 2008 data persuasive?</i> | <ul style="list-style-type: none"> ○ Measure understory utilization in each pasture before cattle entry, during use, and after cattle leave; and prior to snow. <i>GOB volunteers, Mary's students (in Sept only), Jim C. & John C.</i> (Part of early range readiness monitoring?) |
| <ul style="list-style-type: none"> ○ Pellet group counts | | <ul style="list-style-type: none"> ○ <i>Late May/Early June:</i> Pellet group counts (UDWR; Steve) |
| <ul style="list-style-type: none"> ○ White Ledges near Manning Meadow on Monroe exclosure (a visual) | | <ul style="list-style-type: none"> ○ <i>By next meeting:</i> Report on whether there are any good locations for placement of three-way exclosures Bob C. |
| | | <i>Thursday, March 20, 6:00 pm:</i> Evening phone conference to find out about the location and design of utilization studies. <i>Mary, Bob C., Permittees, Doug, Steve, Sean</i> |



**Grazing Management – Existing and Desired Conditions
Pine Creek – Sulphurbeds Allotment**

6. Utilization Criteria

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|---|
| Forest Plan Amendment, August 1, 2001. All Permits modified to include new standards. | Is the standard being met or exceeded? | <i>Throughout season:</i> Monitoring in 2008 (Doug, John/Jim?; fall Whitman College students) |
| Monitoring from 2007. | Is the standard effective in improving the forage resource? | Rapid assessment of aspen/cottonwood browse (Mary and interns) |
| | Is the standard effective in allowing native species to thrive? | <ul style="list-style-type: none"> ○ <i>By February:</i> Bring a proposed method for assessing willow; ○ Use a Collaboration-approved method for assessing willow browse (Mary) |
| | How to address both streambank and browse utilization? | <i>August:</i> Use Rapid Stream Riparian Assessment (David Smuin; Jim Catlin) |
| | | A Forest Supplement to accept the browse assessment methods being used (<i>Doug, Diane Freeman</i>) |

**Grazing Management – Existing and Desired Conditions
Pine Creek – Sulphurbeds Allotment**

7. Cheat Grass and Noxious Weeds

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|---|---|--|
| Noxious weed infestations have been mapped and are treated each year. | Can cheatgrass seed production be reduced through early grazing? Doug did this on bulbous bluegrass in NV (Robin Tausch). | Test 3 years in a row on extreme NW corner of allotment. Some fences already in place. Clean pond out in the area. Potential chaining after intensive grazing on one portion (<i>Doug, Lee R; Joe</i>) |
| Some discussion of cheatgrass treatments using livestock. | How well are some of the newer cheatgrass herbicides working? (Using some on Milford Flat fire?) | Literature search on results of similar work (e.g., Robin Tausch?) |
| | | John K. talk to Nicole Frey about a potential graduate |



| | | |
|--|--|--|
| | | student interest in the cheatgrass experiment (<i>John Keeler</i>); Look up NFF masters grant application process (<i>Mary</i>) |
| | | <u>Throughout summer.</u> Mapping of cheatgrass on the allotment (Permittees prepare a base map during the Feb. permittee meeting; Doug and permittees might ride); Anybody add to it during the season. |

Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment

8. Grazing Rotation

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|--|---|
| Rotation schedule developed in AMP, being followed in Annual Operating Instructions each year. | Are these current schedules suitable? | <u>February AOP Meeting.</u> Review rotation schedule in annual meeting in February (Doug, permittees) |
| | What are current difficulties with the rotation? | |

Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment

9. Structural Improvements

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|--|
| Fences and water developments have been constructed. | Are new or additional improvements needed?? | <u>February AOP Meeting.</u> Evaluate effectiveness of existing improvements (see # 3, 4) |
| List of improvements shown in permit as being assigned to permit holder for maintenance. | Are existing improvements in need of additional work? | |

Grazing Management – Existing and Desired Conditions Pine Creek – Sulphurbeds Allotment



CommUnity Resolution Inc.

Phone 801-583-6362

Fax 801-582-2043

mstraube@mindspring.com

10. Vegetative Improvements

| What's Been Done | Remaining Questions | To Be Done in 2008 |
|--|---|--|
| Extensive chainings in the 1970's and 1980's. | Would the allotment benefit from additional treatments, and where? | <u>By end of February</u> : Provide information on treatment sites (burns and chainings), goals, evidence of goals being met/not met and where (Doug) |
| Prescribed burning was started in 1998 to present, Wildcat, Pine Creek, Cove Creek pastures. | <ul style="list-style-type: none"> ○ What goals existed for previous treatments? ○ What results have been written up on the treatments? ○ Have the goals been met? ○ Are any trend studies within the treatments? | <ul style="list-style-type: none"> ○ <u>By end of February</u>: Provide information on treatment sites (burns and chainings), goals, evidence of goals being met/not met and where (Doug) |
| | | Determine what sites need to be visited to gather data that are missing (Collaboration) [WHEN?] |
| | | Provide fire history and aspen history as GIS data. <i>Doug or Bob C.</i> |



CHART 5

Specific Dates for Summer 2008 Field Activities

| Week | Task | Specific Days | Participants |
|---------------|--|--|---|
| March 20 | Design methods and locations / elk v. cows | | |
| March 31 | Build and put out utilization cages Pine Creek Ten Mile | | Doug, John C, Joe Y, Selena, Wyatt |
| April 7 | | | |
| April 14 | | | |
| April 21 | | | |
| April 28 | April 29 – next mtg; In-field training – place TBD | 8 am – meet in Beaver, for being in field by 9 | Everyone |
| May 5 | Pellet group counts Pine Creek Ten Mile | | UDWR, Sean, Steve |
| May 12 | | | |
| May 19 | | | |
| May 26 | Pre-season utilization, upland and riparian Pine Creek Ten Mile Rapid stream riparian assessment Pine Creek Beaver reintroduction ??? | May 30, 31, June 1 | Jim and volunteers David Smuin |
| month of June | Beaver reintroduction | | Sean, etc. |
| June 9 | Range readiness Pine Creek Ten Mile | | Doug, Permittees |
| June 16 | | | |
| June 23 | | | |
| June 30 | | | |



| | | | |
|-------------|--|--------------------------------|---|
| July 7 - 18 | Re-read trend studies 10-12 Pine Creek 10-12 Ten Mile Survey selected springs Pine Creek Ten Mile Check reference areas now ??? Evaluate stock water locations for needed improvements Ten Mile Prioritize stock water developments Ten Mile Visit 2 water developments Ten Mile | | Bob C, Dave Tait, Doug, Mary, UNPS, Bob Edwards ?, John C, Sean Doug, Mary Doug, engineers?, Permittee Doug, Permittee, Collaboration Doug, Permittee |
| July 10-12 | Re-read transects | | Mindy Wheeler (volunteer for Mary O'Brien) |
| July 21 | Visit reference areas for browsing comparisons (Cottonwood? Birch Creek East?) | | Bob C, Mary, Doug |
| July 28 | | | |
| August 4 | | | |
| August 11 | | | |
| August 18 | | | |
| August 25 | End-of-season utilization cages data collection Visit reference area for browsing comparisons (Cottonwood [not grazed for 30 years; north of Ten Mile]? South Creek on So. Beaver Allotment, so. of Pine Creek/Sulphurbeds [not being grazed in 2008]?) | | Doug, Jim C, Joe Y, Selena Bob C, Mary, Doug |
| Sept. 1 | Track/monitor riparian stubble height and riparian utilization – Ten Mile Rapid riparian stream assessment Ten Mile Aspen browse counts Ten Mile | 8/30, 8/31 and 9/1 (Labor Day) | Doug, Jim C, volunteers David Smuin |



| | | | |
|-------------------|--|--|---|
| | | | |
| Sept. 8 | | | |
| Sept. 15 | | | |
| Sept. 22 | Aspen browse counts | | Mary and students |
| Sept. 29 | | | |
| Oct. 6 | | | |
| Oct. 13 | | | |
| Oct. 20 | | | |
| Oct. 27 | | | |
| | | | |
| Need dates | Creek visits – Pine Creek before grazing during grazing after grazing | After AOP meetings | Doug, Mary , Selena, Clark?, Wyatt |
| | Elk v. cows activities | post 3-20 | |
| | During grazing utilization, upland and riparian Pine Creek/Sulphurbeds Ten Mile | mid-season, after AOP meetings = estimates | Doug, Jim C, John C, Mary (browsing), Permittees and volunteers |
| | Post grazing utilization, upland and riparian Pine Creek Ten Mile | as cows leave pastures, after AOP meetings = estimates | Doug, Jim C, John C, Mary (browsing) and volunteers |
| | Cheatgrass experiment /electric fence construction | labor availability for fence | ENEL volunteers? |
| | Periodic utilization surveys | | Doug, Jim C |
| | Beaver introduction | | Sean, Steve Flinders, others |
| | | | |
| All season | Cheatgrass/noxious weeds survey (form) | | Anyone and everyone |
| | Utilization (per form) | | Anyone and everyone |
| | Mountain mahogany | | Anyone and everyone |
| | Cattle getting into Cottonwood allotment or out of current pasture? | | Anyone and everyone |

